

**United States Department of the Interior
Bureau of Land Management
Royal Gorge Field Office
3028 E. Main Street
Cañon City, CO 81212**

Environmental Assessment

Hopemore Mine Plan of Operations

DOI-BLM-CO-200-2013-0066 EA

June, 2014



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CHAPTER 1 - INTRODUCTION

1.1 IDENTIFYING INFORMATION

CASEFILE/PROJECT NUMBER (optional): COC73931

PROJECT TITLE: Hopemore Mine

PLANNING UNIT: Arkansas River Subregion #1

LEGAL DESCRIPTION: 6th Principle Meridian, T. 09 S., R. 079 W., Sec. 20, SE ¼ , SE ¼

APPLICANT:
Lockland LLC
902 E. 6th St.
Leadville, CO 80461

1.2 INTRODUCTION AND BACKGROUND

BACKGROUND: This EA has been prepared by the BLM to analyze the proposed mining and tourism operations (Appendix A) at the Hopemore Mine in Leadville, Colorado. The Ibex mines located in the Leadville Mining District began operations in 1902. The Hopemore shaft was sunk in 1907 to reach the 7th level of the Ibex No.4 Mine. Ore bodies in the Leadville Limestone lie on the hanging wall side (southwest) of the Ibex No.4 vein. The Leadville Limestone on the footwall (east) side of the Ibex No. 4 vein was mined via the Hunter Shaft. Historically, each of these mines was worked separately and ore was taken off site for processing. The mine operated through 1916. Since then periodic operations have removed primarily gold and iron ores. Leadville Mining and Milling, a Delaware corporation, located local claims and developed the area in the early 1960's. In 1984, Leadville Mining and Milling performed development work on the Hopemore Shaft. Work included re-timbering of the entire Hopemore shaft, establishment of the new 7th level by sinking the shaft to a depth greater than 700 feet, partial rehabilitation of the other levels, several raises, connection of the 5th level with the Hunter shaft, and re-timbering of the Hunter escape shaft. Later the corporation switched names to Capitol Gold, a Nevada corporation. In 1994, the corporation gave up claim to the area as a result of unknown complications. Robert Calder took ownership of the area in the early 2000's. Mr. Calder started Lockland, LLC in 2004 - the company that operates the Hopemore Shaft today. Hopemore has operated solely as a tourist mine since 2008 under Colorado Division of Reclamation, Mining and Safety (CDRMS) tourist mine regulations. The Hopemore shaft was filed with CDRMS as a component of Calais Resources Colorado, Inc. (M1990057). During 2011 and 2012, Lockland, LLC rehabilitated the hoist, cage and compressors, constructed board walks, parking and viewing decks, implemented a weed control plan, and conducted other extensive care and maintenance to site, mine, and facilities at the Hopemore Shaft. Calais Resources Colorado, Inc. and Lockland, LLC separated in April 2013. Permitting under CDRMS, Mine Safety and Health Administration (MSHA), BLM, Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), Colorado Department of Public Health and Environment (CDPHE), etc. for active mining in the Hopemore and Hunter shafts was initiated in May 2013. Mining operations are expected to begin in 2014 while tourist operations continue. For public safety, mining activity will not occur while tours are being conducted.

An application for patent on the Comstock Lode, where the Hopemore Shaft is located, was filed and later challenged. The challenge was never resolved, and therefore a patent was never issued. The public was not aware of this issue, so the Comstock Lode was never included in additional patent applications for surrounding lands. It was discovered by Robert Calder in 2009 that this property was still owned by the United States and managed by BLM and he subsequently staked claim to the land (CMC278317). After Mr. Calder brought the mine site to BLM's attention, a cadastral survey and a cultural resource assessment of the claim area were soon initiated.

1.3 PURPOSE AND NEED

BLM's purpose is to analyze and disclose the impacts of the Hopemore Mine proposal that will include mining operations to extract gold, silver and other metals as well as provide mine tours to the public¹. The need for the action stems from BLM's multiple-use mission set forth in the Federal Land Policy and Management Act of 1976, which mandates that we manage public land resources for a variety of uses, of which mining federal mineral resources is one of them. The Royal Gorge Resource Plan (1996) allows the area to be open for mineral entry and states that locatable minerals will continue to be managed under 43 CFR 3809 regulations.

The manager will determine if there are any significant impacts to the human environment, as disclosed by the procedural requirements of NEPA that involve evaluation and disclosure of impacts. As a non-discretionary action under the General Mining Law of 1872, the purpose of the Hopemore Plan of Operations analysis under the substantive requirement of FLPMA is to prevent Undue or Unnecessary Degradation when making the decision analyzed in the NEPA document.

Per 30 USC Sec. 1602 (01/03/2012), The Congress declares that it is the continuing policy of the United States to promote an adequate and stable supply of materials necessary to maintain national security, economic well-being and industrial production with appropriate attention to a long-term balance between resource production, energy use, a healthy environment, natural resources conservation, and social needs. The Congress further declares that implementation of this policy requires that the President shall, through the Executive Office of the President, coordinate the responsible departments and agencies to, among other measures, 1) identify materials needs and assist in the pursuit of measures that would assure the availability of materials critical to commerce, the economy, and national security and 2) encourage Federal agencies to facilitate availability and development of domestic resources to meet critical materials needs.

1.4 DECISION TO BE MADE

BLM will analyze the proposed Plan of Operations for the Hopemore Mine to determine the following:

1. Will the proposed action result in significant impacts that would warrant preparation of an Environmental Impact Statement?
2. If the proposed action cause unnecessary or undue degradation, what actions will be required of the operator to mitigate this?
3. In addition, BLM needs to analyze the proposed action, in order to understand if an occupancy is being proposed and, if so, that conditions under 43 CFR 3715 will be met.

¹ The tourist operations will be analyzed as part of the mining operations being proposed under the General Mining Law of 1872. Recent case law [*United States v. Hicks*, United States District Court for the District of Montana (2009)] indicates that this is the appropriate authority for management of this activity.

Results and any mitigation developed through this environmental assessment and resulting decision document will be forwarded to the CDRMS for inclusion into their permitting process. The BLM will require mitigation of probable impacts to a level that prevents unnecessary or undue degradation of the public lands and is consistent with performance standards outlined in 43 CFR 3809.420.

Decisions regarding the approval or non-approval of the Plan of Operations submittal and concurrence or non-concurrence of any potential occupancy will be addressed separately from this Environmental Assessment.

1.5 PLAN CONFORMANCE REVIEW

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: Royal Gorge Resource Area Resource Management Plan

Date Approved: May 13th, 1996

Decision Number/Page: 1-40 and 1-41/2-1-8

Decision Language: 1-40: Areas will be open to mineral entry and available for mineral materials development: administered under existing regulations; limited by closure if necessary; and special mitigation will be developed to protect values on a case-by-case basis.

1-41: Areas will be open to mineral entry and available for mineral materials development under standard mineral operating practices.

In January 1997, the Colorado State Office of the BLM approved the Standards for Public Land Health and amended all RMPs in the State. Standards describe the conditions needed to sustain public land health and apply to all uses of public lands.

Standard 1: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes.

Standard 2: Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods.

Standard 3: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential.

Standard 4: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Standard 5: The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado.

Because standards exist for each of these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in Chapter 3 of this document.

1.6 SCOPING, PUBLIC INVOLVEMENT AND ISSUES

NEPA regulations (40 CFR §1500-1508) require that the BLM use a scoping process to identify potential significant issues in preparation for impact analysis. The principal goals of scoping are to allow public participation to identify issues, concerns, and potential impacts that require detailed analysis.

Persons/Public/Agencies Consulted: Scoping, by posting this project on the Royal Gorge Field Office NEPA website and submitting a public notice to the local Leadville paper, were the primary mechanisms used by the BLM to initially identify issues. Comments were received during the public comment period for the Draft EA. These are summarized in Appendix B.

Issues Identified: No issues were identified during public scoping.

CHAPTER 2 - PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

The purpose of this chapter is to provide information on the Proposed Action and Alternatives. Alternatives considered but not analyzed in detail are also discussed.

2.2 ALTERNATIVES ANALYZED IN DETAIL

2.2.1 Proposed Action

The Hopemore mine is an underground mine located east of Leadville, Colorado, see Figure 1. The operator intends to operate the mine for both providing public tours and mining of gold, silver, lead, copper, iron, and zinc ores. The operations are proposed for a 9.9 acre area having an existing surface disturbance of 1.9 acres. A large portion of this operation occurs on BLM surface, however, some of the operations are also located on patented mining claims owned by Mr. Calder (Figures 2 and 3).



Photo 1: Overview of mine site, existing buildings

Geology

The Hopemore Shaft is located between the Mosquito Range to the east and the Sawatch Range to the west in the Southern Rocky Mountain province. This province has a range in elevation from 6,000 feet to over 14,000 feet, and encompasses part of the Rio Grande Rift System. Regionally, rock types vary markedly from Precambrian igneous and metamorphic stratigraphy to Paleozoic sedimentary stratigraphy, Tertiary volcanic and intrusive rocks, and alluvial deposits. The Leadville Mining District is comprised of highly faulted Paleozoic shelf carbonate rocks, intruded with Tertiary quartz monzonite porphyries, on the east side of the Arkansas River graben. The deposits in

this district include precious and base metal massive sulfide veins, carbonate-hosted deposits, near-surface oxidized deposits, gold-bearing magnetite skarns, and gold-rich veins. The Hopemore shaft intersects the Ibez No. 4 vein where valuable sulfide, carbonate, and siliceous ores are found in magnetite-skarn replacement bodies in the Leadville Limestone. Irregular magnetite-serpentine bodies surround the skarn deposits, but do not produce a significant amount of ore to be valuable. The table included in Appendix A highlights the probable ore minerals in the Hopemore mine. The operator intends to mine the porphyry deposits. Due to the intrusive nature of the porphyries, the other known deposits will also be encountered during mining operations.

Site Design & Development

The Hopemore mine is an underground mine with two portals already in existence one on the 10.5 acre unpatented Comstock Lode claim (Hopemore shaft) and the other on the 9.85 acre patented Robert Burns claim (Hunter shaft). The Plan of Operations is for a 9.9 acre area with an existing surface disturbance of 1.9 acres. No additional area will be disturbed at the surface. The proposed surface area slopes at 3% grade or less. There will be no stockpiles of topsoil for later reclamation, as alternative topsoil will be used because topsoil is less than 2 inches thick and is not suitable for salvaging or storage. In addition, topsoil was not salvaged prior to construction of the existing structures.

Current surface structures are shown on Figure 4 and include both facilities and existing surface development: hoist room, shop building, water tank storage building, Hopemore and Hunter Shafts head frames, mine office, parking lot, viewing stand, shared telephone/electric utility poles, septic system or port-a-lets, stockpile storage area, culverts, best management erosion control structures (CDRMS app pg43-45), and an 18-foot wide access road from County Road 1. All existing structures will be utilized in the proposed plan of operations and no new structures are proposed at this time.

The ATF permit is being submitted for explosives storage and use on site. Explosives will be stored in accordance with MSHA and ATF regulations in an area remote from the general public. The magazine will be locked and accessible to designated trained personnel only. A stormwater management plan has been drafted (Appendix A) in compliance with CDPHE regulations. The existing stockpile storage area is not lined. The base is made of clay and runoff from the pad is directed down a ditch into a sediment pond.

Mine Plan

The Hopemore Shaft will be operated by Robert Calder of Lockland, LLC as a tour mine and active mining operation beginning in 2014. Commodities to be mined include gold, silver, lead, copper, iron, and zinc ores. The Hopemore Shaft on the Comstock Lode unpatented claim will be the primary entrance, with the Hunter shaft on the Robert Burns patented claim acting as an escape route and a secondary portal for ore transport. Both vein type and bedded replacement type ores will be mined. The depth of the active mining is over 500 feet deep and will occur on several levels, as seen on Figures 5-1 and 5-2.



Photo 2: Underground workings

Operations will proceed at an estimated rate of 40 to 80 tons of production per day. The ore will be removed from the mine using ore carts and stored on the existing storage pad until being moved off site for processing. The maximum amount of ore to be stored at any one time is estimated as 300 tons or less. The maximum storage time on the surface will not exceed 60 days , however the goal is to remove ore within 72 hours. Mine rock that has low economic value will remain underground

and be moved to a previously mined out area. If acid or toxic material is identified during mining, the material will be isolated from water to mitigate the possibility of offsite impacts to surface and groundwater resources. Isolation may include covering the material with geosynthetic materials or constructing a roof over the storage area. The foundation may consist of a geosynthetic liners or an impermeable ore storage pad.

Material will be transported from the site by one to four 20-ton trucks at a frequency of no more than 4 return trips per day. Trucks will be covered and speed limits on site will be limited to 15 mph in an effort to mitigate dust generation. The ore will be taken 0.3 miles to the main road and then on to the Leadville Mill, owned and operated by Union Milling LLC located at 13815 Highway 24, Leadville, Lake Couty, Colorado to be processed. The access route is the only access and therefore will be used by the public as well. Significant signage and additional requirements will be mandated by MSHA.

Equipment used on the surface may include 20-ton dump trucks, loader, field support trucks, and a backup generator. In addition, a water truck will be used to periodically spray roads. Underground equipment consists of ventilation and electrical system, jack legs, trackless loader, ore bins, and core drills. The direction of mining is dynamic and may change as the deposit changes. The general configuration of the ore bodies in the Breece Hill area as described in records of past production indicates relatively small ore bodies of 3' to 20' thick. Possibly occurring in strikes of 200'. Exploration via core sampling will be conducted on occasion to clarify the mining direction and if necessary modify mining plans.

All mining at this time will take place from underground workings. 5' x 7' tunnels will be mined using compressed air operating equipment. This type of mining equipment has been in use for many years. Rock drilling with jack-legs, mucking with 12B rail muckers and air powered slushers.



Photo 3: Hoist house

Some exploration will be done from the surface and within the 9.9 acre area, to coincide with underground activities. Exploration activities will be conducted where 50 lb. samples or less will be sent to a laboratory for assay purposes. The samples will be obtained from areas to define faults, joints, mineralogy and potential areas to develop the mine operation. Only light truck mounted equipment is necessary and drill holes will be plugged in accordance with Colorado State regulations and site reclamation completed as soon as practical after completion of drilling (see Reclamation Plan below). Final reclamation of an existing drill site will be completed before starting work from a future drill site.

Quality Assurance Plan:

Monitoring by the mine manager or his designated representative will include checking site security (gates and storage units), stormwater BMP's for functionality and design, potential spills of liquids and solids, posted signs, fire extinguishers, hoist maintenance, and housekeeping practices.

All areas of the mine will be monitored daily through visual observations. Monitoring will be recorded weekly by the mine manager or designated responsible employee. The following items will be included in the monitoring protocol:

- Dust conditions
- Possible deleterious material
- Stormwater runoff or drainage problems or changes
- Stormwater BMPs in place and in good repair
- Status of ore storage pad (ore currently stored, how long stored, seepage from pad)
- Equipment leaks
- Noticeable spills/staining, how cleaned up (if applicable)
- Petroleum products stored appropriately and in good condition
- Any other environmental changes on property

Any ore could possibly have sulfides mixed in the rock (see Appendix A). A rock characterization and handling plan is required per 43 CFR 3809.401. Emmons, et al., 1927 provides historical chemical data on the geologic materials. During the mining operations, chemical data will be obtained from the mill to assess and revise the rock characterization and handling plan regularly. The mine is dry so contact with water will be limited to durations of exposure while stockpiled at the surface. Stockpiles will be removed to the mill site within a maximum of 60 days, as a method to prevent exposure and effects of potentially toxic or deleterious materials.

If a change occurs such as ore, rock types will be updated along with composition assays from milled ore. This information will be continually reviewed during operations, to minimize potential negative impacts.

Interim Management Plan:

Operations of the Hopemore mine is limited by the seasons. Therefore, the mine may not be in operation during snowy months (November through April each year). The following procedures will be followed during this potential seasonal closure, as well as any unexpected closures (BLM and other applicable agencies will be notified during times of extended cessation).

When the mine is not operating, the mine, office buildings and shafts will be locked. Petroleum products used on site will be placed in storage or removed from the site. If run of mine rock remains on site, the storage pile will be covered with geosynthetic material. As necessary, stormwater BMP's will be repaired. Monitoring will continue to be conducted by the mine manager or designated representative. During periods of inactivity or when the site is inaccessible due to snow cover the site will be inspected twice a year, at a minimum, to maintain equipment, security, and reclamation.

Spill Contingency Plan:

There are to be no bulk chemicals stored at the mine. Incidental chemical usage will be limited to household products and stored appropriately in a metal cabinet.

Small quantities of petroleum products, fuel and oil will be stored at a designated area on the mine site. Storage of petroleum hydrocarbons in excess of 300 gallons will not be stored on site. Hydrocarbons in excess of 55 gallons will be placed in secondary containment structures. Additional bulk hazardous substances will not be stored on site. Small quantities of paint, solvents, and lubricants will be stored in a locked storage unit. Drip pans will be used as necessary to contain liquids. A spill kit will be available in the locked chemical storage unit. In the event of a chemical or oil/gas spill, the area will be remediated. Spills resulting in greater than incidental usage amounts will result in notification to the appropriate regulatory agencies, including the BLM.

Reclamation Plan

The disturbed areas within the 9.9 acre permit area will be reclaimed to wildlife habitat upon mine closure in 2035. Reclamation will involve the following:

- Removal of trash, debris, machinery, utilities, and buildings
- Grading to blend with surrounding topography
- Construct a standard CDRMS closure utilizing backfill and gates on the Hopemore and Hunter shafts
- Storm water control installed to convey water around or through disturbed areas to minimize on and off site erosion and sedimentation impacts
- Scarify disturbed areas including the access road
- No topsoil will be stockpiled on site, so an alternative growth medium will be used instead of topsoil
- Place suitable alternative growth material on disturbed areas
- The recommended (as approved by the Natural Resource Conservation Service) seed mix is:
 - 4.5 pounds live seed (PLS) per acre of Arizona Fescue
 - 3.8 PLS per acre Mountain Brom
 - 4 PLS per acre Prairie Junegrass
 - 6.4 PLS per acre Western Wheatgrass
- Seed at a rate of 19lbs/acre using drill seeding methods
- Apply weed-free mulch (2 ton straw/acre) and fertilize, in accordance with industry standards
- After reclamation is completed, the site will be placed under a monitoring program to identify areas requiring sign repair, erosion repair, control noxious weeds, and repairing

other reclamation failures. Monitoring will be conducted by the mine manager or designated representative.

Post closure management/monitoring plan:

- Stormwater controls will be implemented and maintained during reclamation and post-closure until vegetation is re-established.
- The first year after completing reclamation will include two monitoring inspections (late spring and mid-fall).
- Reclamation will be monitored annually for the next four years.
- Reclaimed areas will be repaired and reseeded as necessary.
- Release of the reclamation bond will be sought during the 5th year after final reclamation was initiated and is determined to be complete.

Mine Tours

The mine tours involve a guided tour of the underground workings, to include demonstrating how the miners have to check in and out of the mine, how entry into the shaft works, rock drilling techniques and how ore cars haul out material. For public safety, mining activity will not occur while tours are being conducted and the tours will not be conducted in the same footprint or at the same time as mining activity. CDRMS has specific protocol the directs operations for tourist mines in Colorado.

List of Federal, State, and Local Coordination

Federal Coordination

- MSHA – Identification Number (in process)
- ATF – Blasting Permit (in process)
- BLM, Royal Gorge Field Office – Approval of Plan of Operations (pending)

State of Colorado Coordination

- CDRMS – 110(2)Hard Rock/Metal Mining Reclamation Permit #M-2013-026 (Pending)
- CDPHE Heavy and Light Industrial Activity, Metal Mining and Recycling Industry Stormwater Discharge permit – Certification received, #COR-04-0275
- CDPHE Air Quality – Operator has letter stating the mine facility is exempt from air permitting requirements
- CDPHE Air Quality – Ore haulage APENs (in process)
- Colorado Division of Wildlife Consultation
- State Historic Preservation Office Consultation
- Colorado Department of Transportation – County approved road access permit

Lake County Coordination

- Conditional Use Permit – Approved December 2, 1987
- Parkville Water District Consultation
- Noxious Weed Management Plan

- Building Permit
- Certificate of Occupancy
- County Septic System Permit

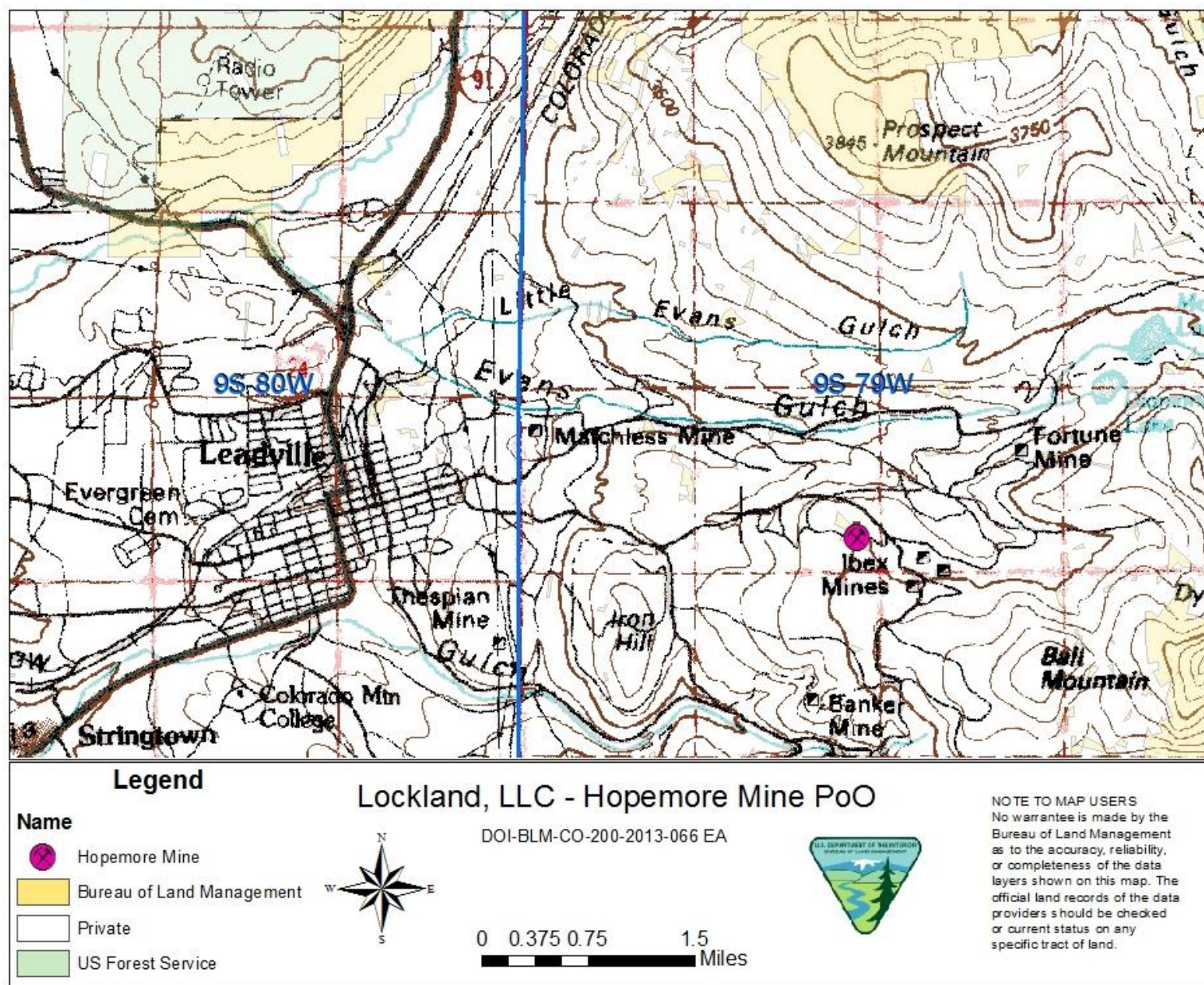


Figure 1 Location map.

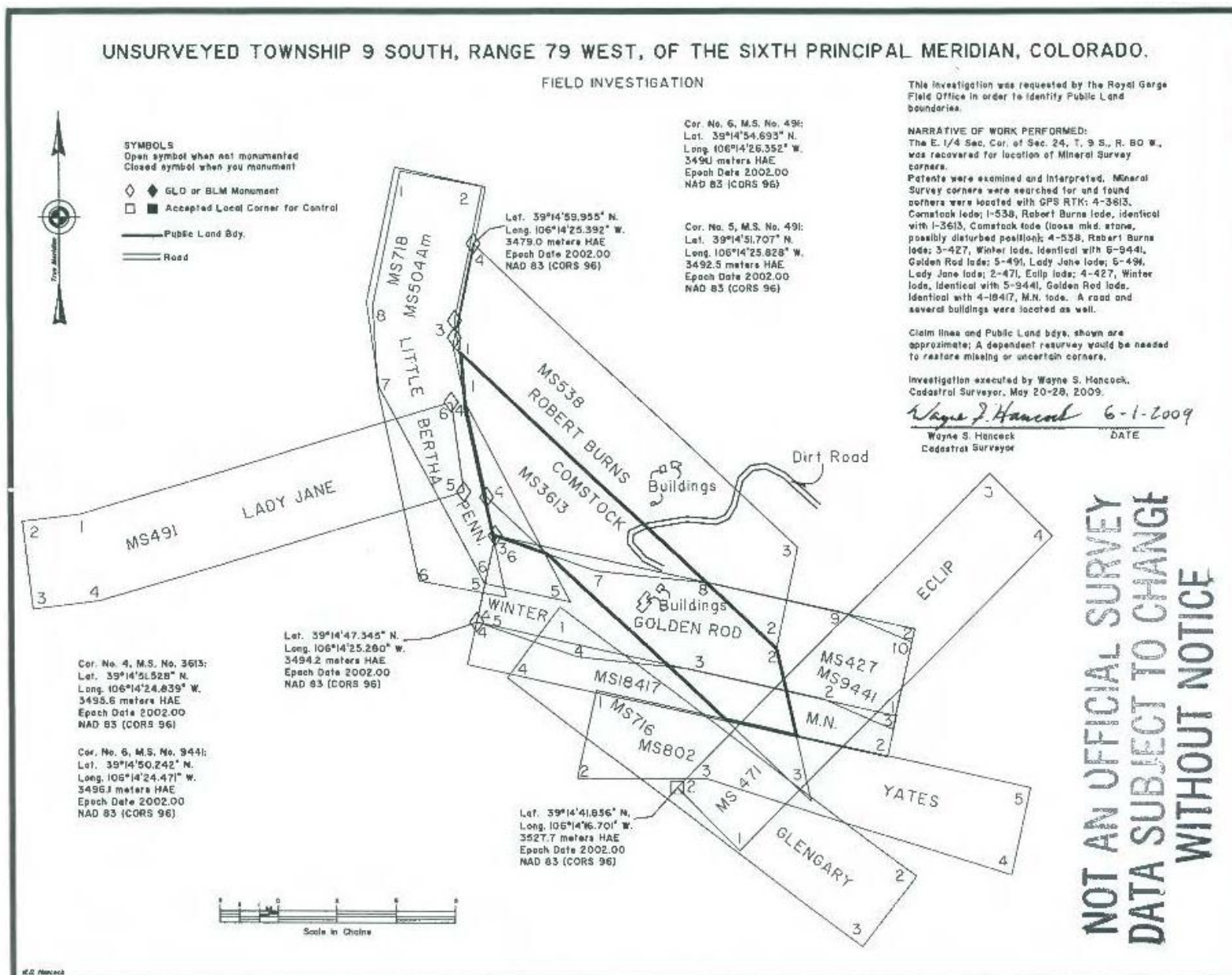


Figure 2 Layout of patented claims, as related to the unpatented Comstock Lode.



Figure 3 Yellow highlighted claim, Comstock Lode.

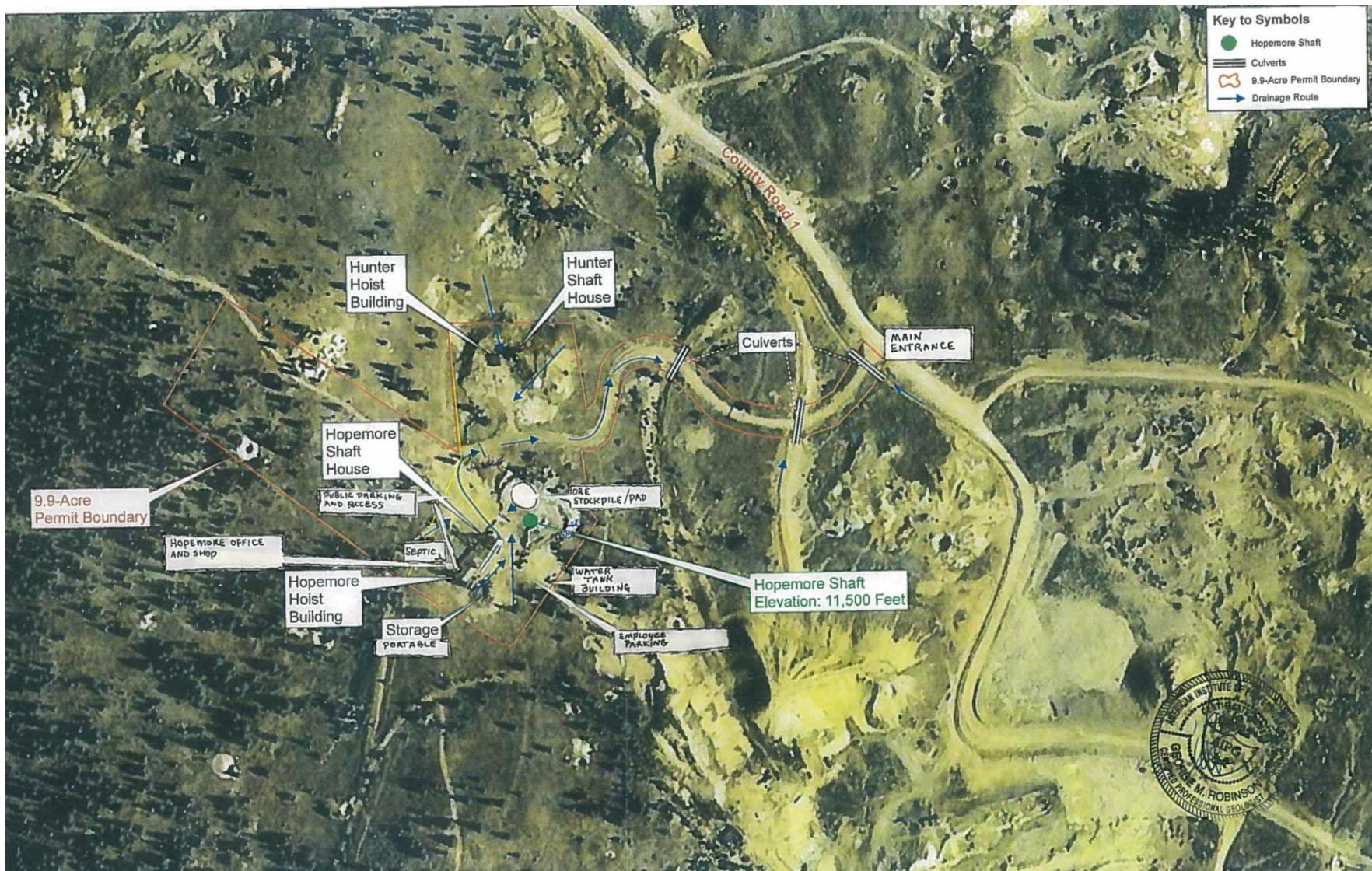


Figure 4 Mine plan map.

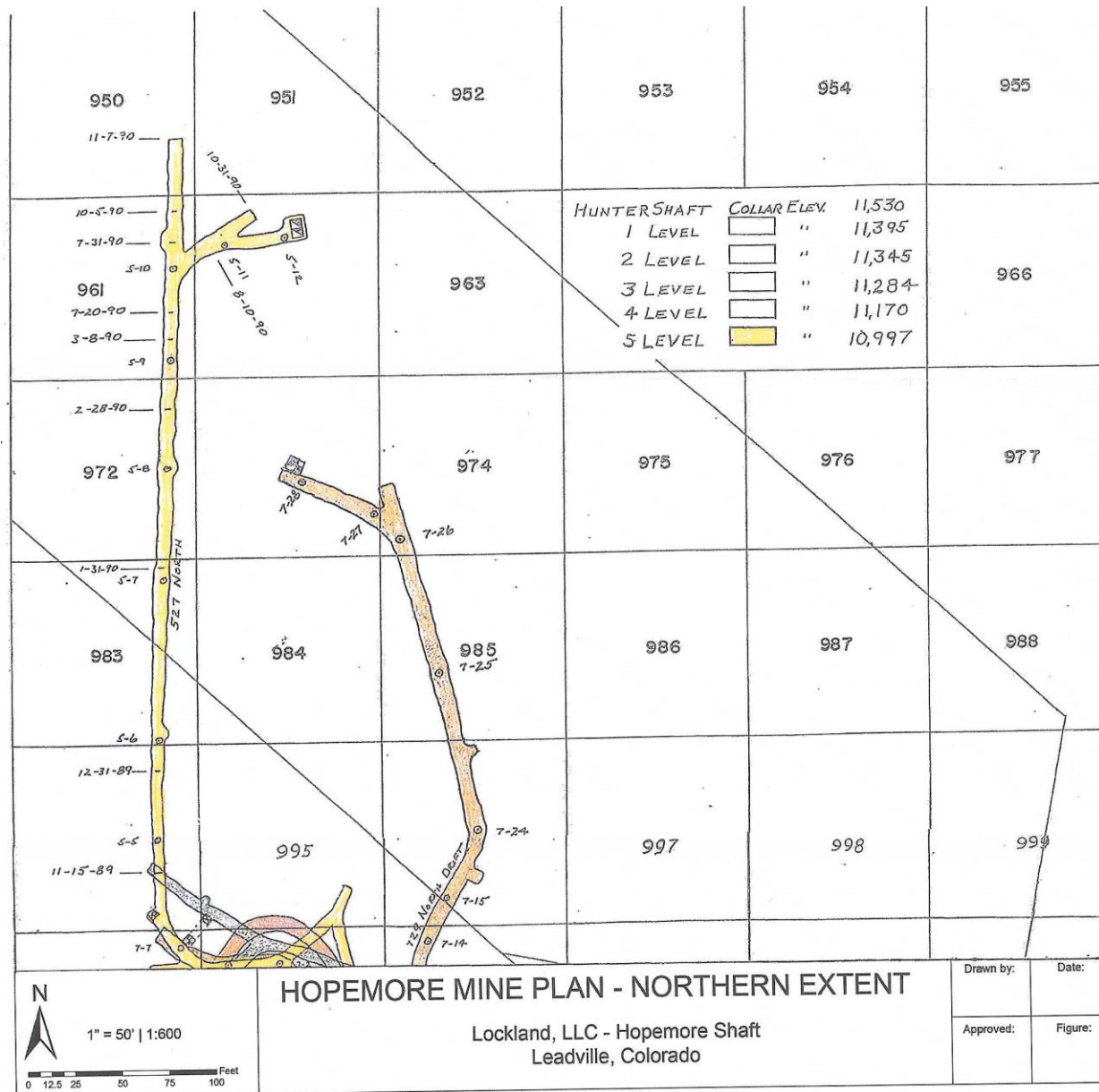


Figure 5.1 Underground workings, Levels 1-5

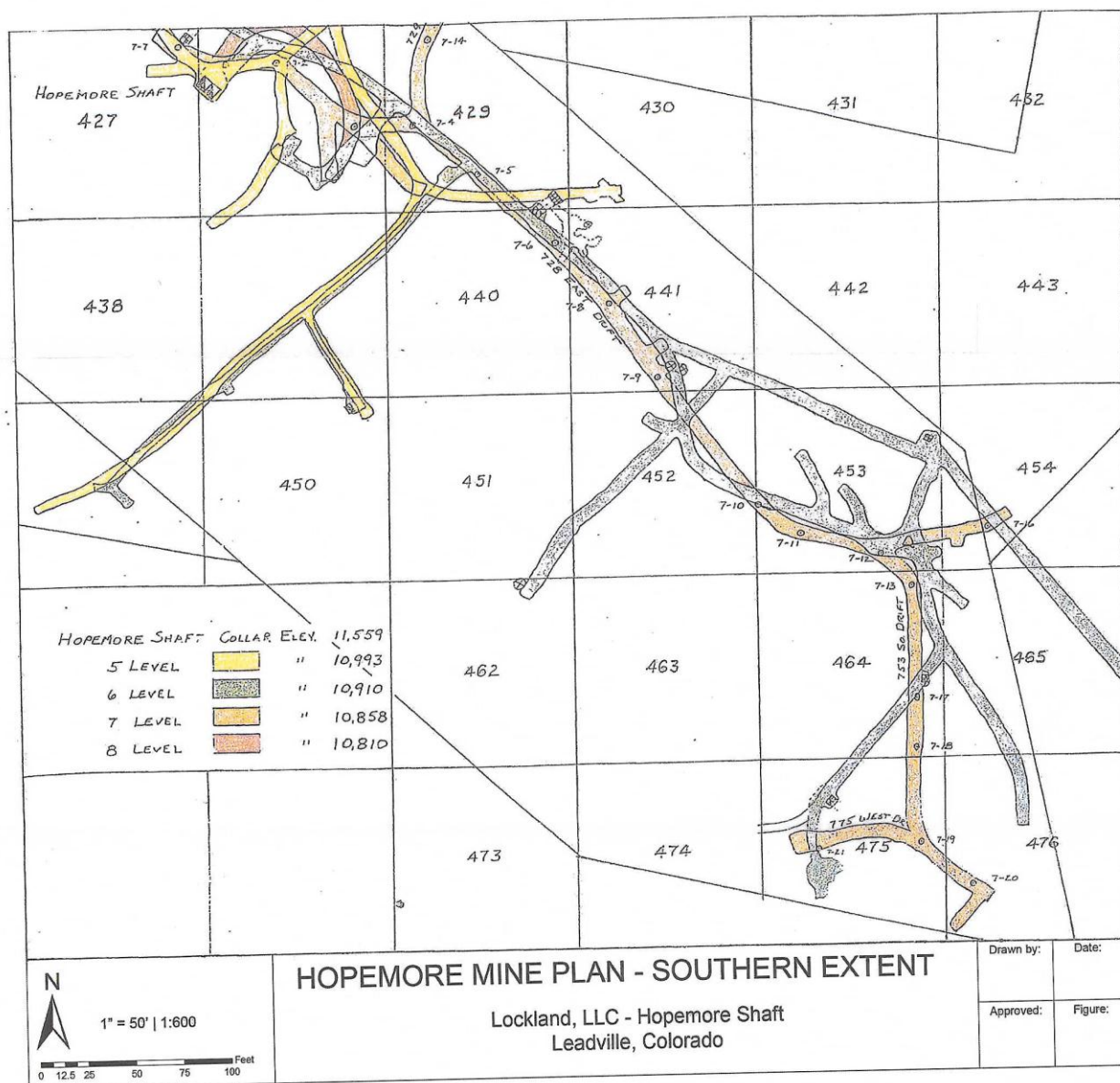


Figure 5.2 Underground workings, levels 5-8

2.2.2 No Action Alternative

Under the General Mining Law of 1872 and within the framework of 43 CFR 3809, the BLM is limited to denying the Plan of Operations only if it has been determined that the proposed action will result in Undue or Unnecessary Degradation (UUD), as defined under 43 CFR 3809.5. In the case of the Hopemore Plan of Operations submittal and at the onset of the NEPA process, it is not obvious that UUD would not be prevented. Therefore the possibility of denying a Plan of Operations can't be determined until after the NEPA evaluation process is complete and it can be concluded that UUD could not be prevented through mitigation or otherwise.

2.2.3 Alternatives

None

2.3 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

None.

CHAPTER 3 - AFFECTED ENVIRONMENT AND EFFECTS

3.1 INTRODUCTION

This section provides a description of the human and natural environmental resources that could be affected by the Proposed Action and presents comparative analyses of the direct, indirect and cumulative effects on the affected environment stemming from the implementation of the actions under the Proposed Action and other alternatives analyzed.

3.1.1 Interdisciplinary Team Review

The following table is provided as a mechanism for resource staff review, to identify those resource values with issues or potential impacts from the proposed action and/or alternatives. Those resources identified in the table as impacted or potentially impacted will be brought forward for analysis.

<u>Resource</u>	<u>Initial and date</u>	<u>Comment or Reason for Dismissal from Analysis</u>
<u>Air Quality</u> <i>Ty Webb, Chad Meister, Melissa Hovey</i>	TW, 3/13/2014	No significant impact to air quality is foreseen.
<u>Geology/Minerals</u> <i>Stephanie Carter, Melissa Smeins</i>	SSC, 4/01/14	No significant impact to geology/minerals is anticipated. For description of geology, see Proposed Action and Appendix A. For further details on geology and deposits local to the site, refer to Emmons, et al., 1929. For analysis of possible occupancy under the Mining Law, see Section 3.2.1 (Geology/Minerals).
<u>Soils</u> <i>John Smeins</i>	JS, 5/30/14	See section 3.2.2 (Soils)

<u>Resource</u>	<u>Initial and date</u>	<u>Comment or Reason for Dismissal from Analysis</u>
<u>Water Quality</u> <u>Surface and Ground</u> <i>John Smeins</i>	JS, 5/30/14	See Section 3.2.3 (Water)
<u>Invasive Plants</u> <i>John Lamman</i>	JL, 05/29/2014	See Section 3.3.1 (Invasive Plants)
<u>T&E and Sensitive Species</u> <i>Matt Rustand</i>	MR, 3/11/2014	No surface disturbing activity, i.e. habitat loss, is to occur as a result of the proposed action. An increase in truck traffic (four loads per day) on an existing county road is an additive impact beyond the current use. Operations are to occur May through October or the snow free months of the year. Using the current setting as a reference, the impacts of the proposed action will be negligible.
<u>Vegetation</u> <i>Jeff Williams, Chris Cloninger, John Lamman</i>	JW 5/27/14	See Section 3.3.2 (Vegetation)
<u>Wetlands and Riparian</u> <i>Dave Gilbert</i>	DG 3/10/14	Reviewing the setting of the Proposed Action reveals the mine location is elevated on a large mountain ridge away from any perennial drainage. Wetland mapping layers show there are no perched wetlands near the footprint of the mine, or for quite some distance downslope. No additional surface disturbance is planned to affect offsite resources.
<u>Wildlife Aquatic</u> <i>Dave Gilbert</i>	DG 3/10/14	See also wetland and riparian comment. No aquatic wildlife habitat is present in the vicinity of this action.
<u>Wildlife Terrestrial</u> <i>Matt Rustand</i>	MR, 3/11/2014	No surface disturbing activity, i.e. habitat loss, is to occur as a result of the proposed action. An increase in truck traffic (four loads per day) on an existing county road is an additive impact beyond the current use. Operations are to occur May through October or the snow free months of the year. Using the current setting as a reference, the impacts of the proposed action will be negligible.
<u>Migratory Birds</u> <i>Matt Rustand</i>	MR, 3/11/2014	No surface disturbing activity, i.e. habitat loss, is to occur as a result of the proposed action. An increase in truck traffic (four loads per day) on an existing county road is an additive impact beyond the current use. Operations are to occur May through October or the snow free months of the year. Using the current setting as a reference, the impacts of the proposed action will be negligible.
<u>Cultural Resources</u> <i>Monica Weimer, Michael Troyer</i>	MMW, 3/10/14	A non-eligible site (5LK2049) is located in the APE [see Report CR-RG-11-81 (P)]. Because no additional surface disturbance will occur, no additional inventory is required, and no historic properties will be affected.
<u>Native American Religious Concerns</u> <i>Monica Weimer, Michael Troyer</i>	MMW, 3/10/14	No possible traditional cultural properties were located during the cultural resources inventory (see above). There is no other known evidence that suggests the project area holds special significance for Native Americans.
<u>Economics</u> <i>Dave Epstein, Martin Weimer</i>	mw, 5/28/14	The proposal would have positive impacts to the operator as a result of mine production and tourist trade and could have a smaller indirect but positive impact to Leadville and the area through tourism and a potential source of employment.
<u>Paleontology</u> <i>Melissa Smeins, Stephanie Carter</i>	SSC, 5/29/14	The geology in this area is not likely to contain recognizable paleontological resources and therefore this project will not have an adverse impact.
<u>Visual Resources</u> <i>Kalem Lenard</i>	KL, 5/19/2014	The project area has a high volume of modifications that contrast with the natural environment. The project would not greatly add or detract from the visual resources in the area and therefore there would no impacts.

<u>Resource</u>	<u>Initial and date</u>	<u>Comment or Reason for Dismissal from Analysis</u>
<u>Environmental Justice</u> <i>Martin Weimer</i>	mw, 5/28/14	The proposed action affects areas that are rural in nature. The land in this area was historically developed for hardrock mining of gold and silver. There are no minority or low-income populations in or near the project area. As such, the proposal will not have a disproportionately high or adverse environmental effect on minority or low-income populations.
<u>Wastes Hazardous or Solid</u> <i>Stephanie Carter</i>	SSC, 4/01/14	Based on information provided, no significant impact resulting from wastes is anticipated.
<u>Recreation</u> <i>Kalem Lenard</i>	KL, 5/19/2014	The parcel does not have any public recreation, outside of the mine tours, and therefore there would be impacts to this resource.
<u>Farmlands Prime and Unique</u> <i>Jeff Williams, Chris Cloninger, John Lamman</i>	JW 5/27/14	Not present
<u>Lands and Realty</u> <i>Greg Valladares</i>	GDV 05/28/14	Not present.
<u>Wilderness, WSAs, ACECs, Wild & Scenic Rivers</u> <i>Kalem Lenard</i>	KL, 5/19/2014	Not present.
<u>Wilderness Characteristics</u> <i>Kalem Lenard</i>	KL, 5/19/2014	Not present.
<u>Range Management</u> <i>Jeff Williams, Chris Cloninger, John Lamman</i>	JW 5/27/14	Not present.
<u>Forest Management</u> <i>Ken Reed</i>	KR, 3/18/14	No trees may be cut or pruned without BLM authorization. No impacts to forest management or forest health.
<u>Cadastral Survey</u> <i>Jeff Covington</i>	JC, 5/28/14	A field investigation occurred in 2009 to verify the location of the area and the surrounding mines in relation to public lands. BLM records indicate that these mineral claims are original surveys and have not been resurveyed BLM records also indicate that the boundaries have not been marked.
<u>Noise</u> <i>Martin Weimer</i>	mw, 5/28/14	This action will not result in any significant impacts due to noise.
<u>Law Enforcement</u> <i>Steve Cunningham</i>	MW for SC, 5/28/14	There are no law enforcement issues associated with this action.

The affected resources brought forward for analysis include:

- Geology/Minerals

- Soils
- Water Quality
- Invasive Plants
- Vegetation

3.2 PHYSICAL RESOURCES

3.2.1 GEOLOGY/MINERALS

Affected Environment: Current surface structures that are part of the proposed action include: hoist room, shop building, water tank storage building, Hopemore and Hunter Shafts head frames, mine office, parking lot, viewing stand, shared telephone/electric utility poles, septic system or port-a-lets, stockpile storage area, culverts and stormwater control structures. All previously existing structures have been updated and restored to a working condition, in order to be utilized in the proposed plan of operations.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: The structures existing at the mine site are identified to be used in implementing the proposed action, which may constitute an occupancy under the Mining Law of 1872, as defined under 43 CFR 3715.0-5.

Per 43 CFR 3715.0-5, Occupancy means full or part-time residence on the public lands. It also means activities that involve residence; the construction, presence, or maintenance of temporary or permanent structures that may be used for such purposes; or the use of a watchman or caretaker for the purpose of monitoring activities. Residence or structures include, but are not limited to, barriers to access, fences, tents, motor homes, trailers, cabins, houses, buildings, and storage of equipment or supplies.

Per 43 CFR 3715.2, Activities that are the reason for an operator's occupancy must:

1. Be reasonably incident;
2. Constitute substantially regular work;
3. Be reasonably calculated to lead to the extraction and beneficiation of minerals;
4. Involve observable on-the-ground activity that BLM may verify under § 3715.7; and
5. Use appropriate equipment that is presently operable, subject to the need for reasonable assembly, maintenance, repair or fabrication of replacement parts.

Per 43 CFR 3715.2-1, in addition to the requirements specified in part 3715.2, the occupancy must involve one or more of the following:

1. Protecting exposed, concentrated or otherwise accessible valuable minerals from theft or loss;
2. Protecting from theft or loss appropriate, operable equipment which is regularly used, is not readily portable, and cannot be protected by means other than occupancy;

3. Protecting the public from appropriate, operable equipment which is regularly used, is not readily portable, and if left unattended, creates a hazard to public safety;
4. Protecting the public from surface uses, workings, or improvements which, if left unattended, create a hazard to public safety; or
5. Being located in an area so isolated or lacking in physical access as to require the mining claimant, operator, or workers to remain on site in order to work a full shift of a usual and customary length. A full shift is ordinarily 8 hours and does not include travel time to the site from a community or area in which housing may be obtained.

Protective/Mitigation Measures: The proposal appears to meet all requirements of 43 CFR 3715.2 and meets items #2, #3 and #4 of 43 CFR 3715.2-1. Therefore, no additional measures are needed.

Cumulative Impacts: Not applicable.

No Action Alternative

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

3.2.2 SOILS (includes a finding on standard 1)

Affected Environment: The site lies at an elevation of approximately 11,500' with shallow, poorly developed soils. Most activities will occur on previously disturbed areas where the soils have been severely altered and no new disturbance is proposed.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: No new soil disturbance is being proposed in connection with this action; however, previously disturbed soils would be reworked and the site would eventually be reclaimed. The eventual reclamation of the 1.9 acres would ultimately leave the soils on the site in better condition than they currently are. Offsite soils impacts are mitigated through the Stormwater Management Plan submitted by the proponent that limits the amount of runoff and sedimentation leaving the site.

Protective/Mitigation Measures: No additional mitigation measures are necessary to protect soil resources beyond what is contained in the Proposed Action and Stormwater Management Plan.

Cumulative Impacts: On a sixth level watershed scale, there have been substantial impacts to area soils since the settlement of the area. Most of this impact is the result of historic mining in the area in the late 1800's. When combined with other activities in the area, the Proposed Action would not add measurable new impacts to area soils in the long term that would lead to major impacts.

No Action Alternative

Direct and Indirect Impacts: Not Applicable

Protective/Mitigation Measures: Not Applicable

Finding on the Public Land Health Standard for Upland Soils: No formal Land Health Assessment has been conducted on the site; however, soils on the site are already heavily disturbed and would not meet standards. In the long term after reclamation is complete sils may begin to meet standards.

3.2.3 WATER (SURFACE AND GROUNDWATER, FLOODPLAINS) (includes a finding on standard 5)

Affected Environment: The site lies on a ridge top tributary to Evans Gulch and ultimately the Arkansas River. No surface water is present and groundwater has not been intercepted by mine workings to date.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: The Proposed Action would bring subsurface rocks to the surface where they would be stockpiled for a short amount of time before being hauled offsite for milling. Currently, the site is in a disturbed condition from previous mining activities and no new surface disturbance is expected. From a water stand point, three possible issues could occur with the proposal. First, stormwater runoff from the area could carry sediment and other pollutants offsite to downstream waters. The second possible issue is the potential for the mine rock to react with the surroundings to produce acid or other deleterious products. Finally, there is a possibility of encountering groundwater in the operations.

To address the first issue, the proponent has developed a Stormwater Management Plan for the site that addresses surface runoff from the site during storm events and snowmelt periods. This plan contains mitigations that would limit the amount of runoff and pollutants that would leave the site.

To address the second issue, preliminary geochemical characterization indicates that the material that would be produced would not be reactive; however, the proponent has committed to not store mine rock on the site for more than 60 days in an effort to limit the amount of exposure that takes place. In addition, if it is discovered that there is potential for the formation of deleterious materials, the proponent has committed to isolating them by lining the stockpile pad.

To address the final issue, the proponent states that they would obtain a permit from the Colorado Department of Public Health and Environment (CDPHE). More permits would be needed then just from CDPHE if groundwater is encountered. At a minimum, a NPDES permit from CDPHE would be required for any pumping to dewater the mine and the proponent would need to obtain water rights for this activity. In addition, the potential for acid forming rock inside the mine could become possible. This could be very difficult to deal with and would change the overall project.

Overall, with mitigations, the project would have minimal impacts on water in the area.

Protective/Mitigation Measures:

- The proposed action states that chemical data will be obtained from the mill to assess and revise the rock characterization and handling plan regularly. If it is determined that acid or other toxic material generation could be produced by the mine rock, the storage pad and associated runoff must be isolated so as to not enter surface or ground water. This data needs to be provided to the BLM on an annual basis.
- We generally don't want to use rye or barley straw for mulch types. Also, it would be advantageous if it was cheat grass free.
- Post-closure, twice a year monitoring may not be enough, especially in the first year. If you inspect in late spring and mid fall you are essentially missing most of the growing/runoff season. I would recommend at least monthly while the area is snow free.
- What is the measure of successful reclamation? I would recommend we hold them to approximating an undisturbed reference site as far as species diversity, cover, etc.
- If groundwater is encountered during mining operations, coordination with BLM and applicable permits will need to be initiated. If encountered groundwater happens to discharge from the underground workings, immediate notification to BLM is required. The process of a mine plan modification, a bond re-assessment and other agency permitting would be started immediately.

Cumulative Impacts: On a sixth level watershed scale, there have been substantial impacts to area water since the settlement of the area. Most of this impact is the result of historic mining in the area in the late 1800's and early 1900's. Due to the dry location of the site, little impact to water would be expected. When combined with other activities in the area, the Proposed Action with mitigation would not add measurable new impacts to area waters in the long term that would lead to major impacts.

No Action Alternative

Direct and Indirect Impacts: Not Applicable

Protective/Mitigation Measures: Not Applicable

Finding on the Public Land Health Standard for Water Quality: No formal Land Health Assessment has been conducted for the area. Some area waters are on the Colorado 303(d) list as being water quality impaired; however Evans Gulch is not on the list. The Proposed Action, with mitigation, would not be expected to cause Evans Gulch to not meet State water quality standards.

3.3 BIOLOGICAL RESOURCES

3.3.1 INVASIVE PLANTS*

Affected Environment: Invasive plants are common in the area due to historical agricultural practices. The native plant community has been altered due to the historical practices in the area. The ecological sites that make up the project site are prone to a variety of weed infestations if soil surface disturbance occurs. Invasive plants within 10 miles of the project area include but

are not limited to: yellow toadflax, oxeye daisy, scentless chamomile, leafy spurge, houndstongue, hoary cress, common tansy, and Canada thistle,

Environmental Effects

Proposed Action

Direct and Indirect Impacts: Due to the long-term exposure of the project area to historical practices, expected impacts are thought to be minor.

Protective/Mitigation Measures: Areas disturbed by project implementation will be monitored for the presence of weeds on the Colorado State Noxious Weed list. Monitoring is required for the life of the project and for three years following project completion. Identified noxious weeds in disturbed areas will be treated by project proponent.

Cumulative Impacts: None.

No Action Alternative

Direct and Indirect Impacts: None.

Protective/Mitigation Measures: None.

*Invasive plants are plants that are not part of (if exotic), or are a minor component of (if native), the original plant community or communities that have the potential to become a dominant or co-dominant species on the site if their future establishment and growth are not actively controlled by management interventions, or are classified as exotic or noxious plants under state or federal law. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants.

3.3.2 VEGETATION (includes a finding on standard 3)

Affected Environment: The analysis area takes place within a subalpine ecosystem. Precipitation occurs primarily as snow, but wet thunderstorms are frequent during the short summer months. Average annual precipitation varies between 16 - 25 inches depending on the year. The average annual temperature for this area is approximately 30 degrees F. Winds are typical in the area year round and can be very strong at times. The growing season is very limited at this elevation and consists of 40 to 45 days, typically July 1 through August 15.

The vegetation on this site is a mixture of spruce/fir and lodge pole pine. The understory typically consists of Thurber fescue, native blue grasses, Parry oatgrass, sedges, perennial forbs, sage brush, snowberry and cinquefoil.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: Less than 2 acres of the proposed action directly impacts vegetation in the area. In this area vegetation is void where mining activities occur. The mining Plan of Operation contains a reclamation plan that adequately addresses the impacts to vegetation in the long term.

Protective/Mitigation Measures: None.

Cumulative Impacts: None anticipated.

No Action Alternative

Direct and Indirect Impacts: None.

Protective/Mitigation Measures: None anticipated.

Finding on the Public Land Health Standard for Plant and Animal Communities: A formal health assessment has not been conducted in this area, however, based on observations it would appear that upland vegetative standards are being met on a landscape basis.

3.6 CUMULATIVE IMPACTS SUMMARY

Most of the existing, surficial impacts are the result of historic mining in the area, dating back to the late 1800's. When combined with other activities in the area, the Proposed Action would not add measurable new negative cumulative impacts to natural resources in the area.

The proposal would have positive cumulative impacts to both the local and regional economies, as a result of mine production and the tourist trade.

CHAPTER 4 - CONSULTATION AND COORDINATION

4.1 LIST OF PREPARERS AND PARTICIPANTS

Please see Interdisciplinary Team Review list for BLM Participants

4.2 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED

Division of Reclamation, Mining and Safety

CHAPTER 5 – REFERENCES

Bureau of Land Management. 2001. 43 CFR 3809 regulations.

Bureau of Land Management. 2012. H-3809-1 Surface Management Handbook. Washington, D.C.

Bureau of Land Management. 2008. H-1790-1 National Environmental Policy Handbook. Washington, D.C.

Emmons, S. F., Irving, J. D. and Loughlin, G. F., 1927, Geology and Ore Deposits of the Leadville Mining District, Colorado, United States Geological Survey, Professional Paper 148, 368 p.

Finding Of No Significant Impact (FONSI)

DOI-BLM-CO-200-2013-0066 EA

Based on review of the EA and the supporting documents, I have determined that the project is not a major federal action and will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects from any alternative assessed or evaluated meet the definition of significance in context or intensity, as defined by 43 CFR 1508.27. Therefore, an environmental impact statement is not required. This finding is based on the context and intensity of the project as described below:

RATIONALE:

Context:

The proposed action is to implement a Plan of Operations for the Hopemore mine, which is an underground mine located just east of Leadville, Colorado and within the historic mining district. This action was selected as the most viable alternative, given the analysis conducted with the EA effort and the determination that undue or unnecessary degradation will be prevented. The mine will be operated for both providing public tours and the mining of gold, silver, lead, copper, iron, and zinc ores. The operations are proposed for a 9.9 acre area having an existing surface disturbance of 1.9 acres, with operating timeframes mostly occurring during the non-snowy months (November through April each year). The action is considered to have only local significance, affecting the local economy of the town Leadville in a minor way.

Intensity:

I have considered the potential intensity/severity of the impacts anticipated from the Hopemore Mine Plan of Operations decision relative to each of the ten areas suggested for consideration by the CEQ. With regard to each:

Impacts that may be beneficial and adverse:

Below is a summary of the identified impacts and associated mitigation recommend for each of the resource areas:

1. Geology/Minerals
 - a. Impacts: The structures existing at the mine site are identified to be used in implementing the proposed action, which may constitute an occupancy under the Mining Law of 1872, as defined under 43 CFR 3715.0-5.
 - b. Protective/Mitigation Measures: The proposal appears to meet all requirements of 43 CFR 3715.2 and meets items #2, #3 and #4 of 43 CFR 3715.2-1. Therefore, no additional measures are needed.

2. Soils

- a. Impacts: No new soil disturbance is being proposed in connection with this action; however, previously disturbed soils would be reworked and the site would eventually be reclaimed. The eventual reclamation of the 1.9 acres would ultimately leave the soils on the site in better condition than they currently are. Offsite soils impacts are mitigated through the Stormwater Management Plan submitted by the proponent that limits the amount of runoff and sedimentation leaving the site.
 - b. Protective/Mitigation Measures: No additional mitigation measures are necessary to protect soil resources beyond what is contained in the Proposed Action and Stormwater Management Plan.
3. Water (Surface and Groundwater, Floodplains)
- a. Impacts: The Proposed Action would bring subsurface rocks to the surface where they would be stockpiled for a short amount of time before being hauled offsite for milling. Currently, the site is in a disturbed condition from previous mining activities and no new surface disturbance is expected. From a water stand point, three possible issues could occur with the proposal. First, stormwater runoff from the area could carry sediment and other pollutants offsite to downstream waters. The second possible issue is the potential for the mine rock to react with the surroundings to produce acid or other deleterious products. Finally, there is a possibility of encountering groundwater in the operations.

To address the first issue, the proponent has developed a Stormwater Management Plan for the site that addresses surface runoff from the site during storm events and snowmelt periods. This plan contains mitigations that would limit the amount of runoff and pollutants that would leave the site.

To address the second issue, preliminary geochemical characterization indicates that the material that would be produced would not be reactive; however, the proponent has committed to not store mine rock on the site for more than 60 days in an effort to limit the amount of exposure that takes place. In addition, if it is discovered that there is potential for the formation of deleterious materials, the proponent has committed to isolating them by lining the stockpile pad.

To address the final issue, the proponent states that they would obtain a permit from the Colorado Department of Public Health and Environment (CDPHE). More permits would be needed than just from CDPHE if groundwater is encountered. At a minimum, a NPDES permit from CDPHE would be required for any pumping to dewater the mine and the proponent would need to obtain water rights for this activity. In addition, the potential for acid forming rock inside the mine could become possible. This could be very difficult to deal with and would change the overall project.

Overall, with mitigations, the project would have minimal impacts on water in the area.

b. Protective/Mitigation Measures:

1. The proposed action states that chemical data will be obtained from the mill to assess and revise the rock characterization and handling plan regularly. If it is determined that acid or other toxic material generation could be produced by the mine rock, the storage pad and associated runoff must be isolated so as to not enter surface or ground water. This data needs to be provided to the BLM on an annual basis.
2. A weed-free mulch (2 ton straw/acre) will be applied and fertilize, in accordance with industry standards
3. Post-closure monitoring should occur monthly for the first year to capture conditions occurring throughout the growing season. If conditions are stable at the site, monitoring could be reduced to twice yearly.
4. For reclamation purposes an undisturbed, nearby reference site should be used to approximate species diversity and cover, as a successful measure of reclamation.
5. If groundwater is encountered during mining operations, coordination with BLM and applicable permits will need to be initiated. If encountered groundwater happens to discharge from the underground workings, immediate notification to BLM is required. The process of a mine plan modification, a bond re-assessment and other agency permitting would be started immediately.
6. Areas disturbed by project implementation will be monitored for the presence of weeds on the Colorado State Noxious Weed list. Monitoring is required for the life of the project and for three years following project completion. Identified noxious weeds in disturbed areas will be treated by project proponent.

4. Invasive Plants

- a. Impacts: Due to the long-term exposure of the project area to historical practices, expected impacts are thought to be minor.
- b. Protective/Mitigation Measures: Areas disturbed by project implementation will be monitored for the presence of weeds on the Colorado State Noxious Weed list. Monitoring is required for the life of the project and for three years following project completion. Identified noxious weeds in disturbed areas will be treated by project proponent.

5. Vegetation

- a. Impacts: Less than 2 acres of the proposed action directly impacts vegetation in the area. In this area vegetation is void where mining activities occur. The mining Plan of Operation contains a reclamation plan that adequately addresses the impacts to vegetation in the long term.
- b. Protective/Mitigation Measures: None.

Below is a summary of the benefits associated with this proposed action:

- Local jobs created in Lake County.
- Mineral resources extracted for use in a variety of American markets.
- Benefits to the local economy through the purchase of inputs to production associated with the proposed action.
- Mine tours provide an end destination for people visiting the area, which contributes to the local economy.

Public health and safety:

The proposed action is not expected to result in significant impacts to air quality, water quality, sedimentation, hazardous materials, and other factors contributing to public health and safety. Mitigation has been provided in the proposed action to further prevent these factors from affecting public health and safety. In addition, physical safety is addressed during the mining and mine tour operations through administrative and engineered controls outlined within this EA and mandated by MSHA (Mining, Safety and Health Administration) and Colorado Division of Reclamation and Mining Safety (CDRMS).

Unique characteristics of the geographic area:

There were no unique characteristics of the geographic area identified during the resource analysis.

Degree to which effects are likely to be highly controversial:

The potential for controversy associated with the effects of the proposed action on resource values is low. There is no disagreement or controversy among ID team members or reviewers over the nature of the effects on the resource values on public land by the proposed action.

Degree to which effects are highly uncertain or involve unique or unknown risks:

Mining has occurred in this area throughout history and although the potential risks involved can be controversial, they are neither unique nor unknown. The proposed operation consists of industry standard practices, resulting in impacts that would normally be expected from an activity being accomplished in compliance with current standards and regulations and based on sound practices. There is low potential of unknown or unique risks associated with this project due to the nature of the proposed operation and similar mining activity has occurred in the area.

Consideration of whether the action may establish a precedent for future actions with significant impacts:

There are no aspects of the current proposal that are precedent setting and implementation of the proposed action will be in accordance with standard practices, federal laws and regulations and the Resource Management Plan that are consistent with other allowable operations involving BLM managed surface.

Consideration of whether the action is related to other actions with cumulatively significant impacts:

Most of the existing, surficial impacts are the result of historic mining in the area, dating back to the late 1800's. When combined with other activities in the area, the Proposed Action would not add measurable new negative cumulative impacts to natural resources in the area. The proposal would have positive cumulative impacts to both the local and regional economies, as a result of mine production and the tourist trade.

Scientific, cultural or historical resources, including those listed in or eligible for listing in the National Register of Historic Places:

A non-eligible site (5LK2049) is located in the APE [see Report CR-RG-11-81 (P)]. Because no additional surface disturbance will occur, no additional inventory is required, and no historic properties will be affected. No possible traditional cultural properties were located during the cultural resources inventory (see above). There is no other known evidence that suggests the project area holds special significance for Native Americans.

Threatened and endangered species and their critical habitat:

No surface disturbing activity, i.e. habitat loss, is to occur as a result of the proposed action. An increase in truck traffic (four loads per day) on an existing county road is an additive impact beyond the current use. Operations are to occur May through October or the snow free months of the year. Using the current setting as a reference, the impacts of the proposed action will be negligible.

Any effects that threaten a violation of Federal, State or local law or requirements imposed for the protection of the environment: The proposed action conforms with the provisions of NEPA (U.S.C. 4321-4346) and FLPMA (43 U.S.C. 1701 et seq.) and is compliant with the Clean Water Act and The Clean Air Act, the National Historic Preservation Act, Migratory Bird Treaty Act (MBTA) and the Endangered Species Act.

NAME OF PREPARER: Stephanie S. Carter

SUPERVISORY REVIEW: Jay Raiford

NAME OF ENVIRONMENTAL COORDINATOR: /s/ Martin Weimer

DATE: 7/22/14

SIGNATURE OF AUTHORIZED OFFICIAL:

/s/ Keith E. Berger
Keith E. Berger, Field Manager

DATE SIGNED: 7/22/14

APPENDICES: Appendix A – Plan of Operations

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ROYAL GORGE FIELD OFFICE**

**DECISION RECORD
Hopemore Mine Plan of Operations
DOI-BLM-CO-200-2013-0066-EA**

DECISION: It is my decision to authorize the Proposed Action as described in the attached EA. Upon BLM's approval of the Plan of Operations and proposed occupancy, the operator intends to operate the mine for both providing public tours and mining of gold, silver, lead, copper, iron, and zinc ores. The Hopemore mine is an underground mine located just east of Leadville, Colorado and within a historic mining district. The operations are proposed for a 9.9 acre area having an existing surface disturbance of 1.9 acres, with operating timeframes mostly occurring during the non-snowy months (November through April each year), for both mining activity and tours.

The deposits in this district include precious and base metal massive sulfide veins, carbonate-hosted deposits, near-surface oxidized deposits, gold-bearing magnetite skarns, and gold-rich veins. The Hopemore shaft intersects the Ibex No. 4 vein where valuable sulfide, carbonate, and siliceous ores are found in magnetite-skarn replacement bodies in the Leadville Limestone. Operations will proceed at an estimated rate of 40 to 80 tons of production per day. Equipment used on the surface may include 20-ton dump trucks, loader, field support trucks, and a backup generator. In addition, a water truck will be used to periodically spray roads. Underground equipment consists of ventilation and electrical system, jack legs, trackless loader, ore bins, and core drills. Material will be transported from the site by one to four 20-ton trucks at a frequency of no more than 4 return trips per day. Some exploration will be done from the surface and within the 9.9 acre area, to coincide with underground activities.

The mine tours involve a guided tour of the underground workings, to include demonstrating how the miners have to check in and out of the mine, how entry into the shaft works, rock drilling techniques and how ore cars haul out material. For public safety, mining activity will not occur while tours are being conducted and the tours will not be conducted in the same footprint or at the same time as mining activity.

The primary mechanisms used by the BLM to initially identify issues were met by posting this project on the Royal Gorge Field Office NEPA website and submitting a public notice to the local Leadville paper.

This office completed an Environmental Assessment and reached a Finding of No Significant Impact, indicating that the selected alternative will have no significant effect therefore an EIS is not required.

RATIONALE: The proposed action involves both mining operations for federal minerals and providing mine tours to the public. The minerals associated with this subject area are open to the Mining Law of 1872 and under claim by the Operator. The mining operations proposed are

located in a historic mining district and within existing underground workings. The mine tours will complement other tourism destinations in the area. A determination that the proposed action will not have a significant effect on the quality of the human environment and that undue or unnecessary degradation will be prevented is the basis for this rationale.

MITIGATION MEASURES\MONITORING:

1. The proposed action states that chemical data will be obtained from the mill to assess and revise the rock characterization and handling plan regularly. If it is determined that acid or other toxic material generation could be produced by the mine rock, the storage pad and associated runoff must be isolated so as to not enter surface or ground water. This data needs to be provided to the BLM on an annual basis.
2. A weed-free mulch (2 ton straw/acre) will be applied and fertilize, in accordance with industry standards
3. Post-closure monitoring should occur monthly for the first year to capture conditions occurring throughout the growing season. If conditions are stable at the site, monitoring could be reduced to twice yearly.
4. For reclamation purposes an undisturbed, nearby reference site should be used to approximate species diversity and cover, as a successful measure of reclamation.
5. If groundwater is encountered during mining operations, coordination with BLM and applicable permits will need to be initiated. If encountered groundwater happens to discharge from the underground workings, immediate notification to BLM is required. The process of a mine plan modification, a bond re-assessment and other agency permitting would be started immediately.
6. Areas disturbed by project implementation will be monitored for the presence of weeds on the Colorado State Noxious Weed list. Monitoring is required for the life of the project and for three years following project completion. Identified noxious weeds in disturbed areas will be treated by project proponent.

PROTEST/APPEALS: This decision shall take effect immediately upon the date it is signed by the Authorized Officer, and shall remain in effect while any appeal is pending unless the Interior Board of Land Appeals issues a stay (43 CFR 2801.10(b)). Any appeal of this decision must follow the procedures set forth in 43 CFR Part 4. Within 30 days of the decision, a notice of appeal must be filed in the office of the Authorized Officer at the Royal Gorge Field Office, 3028 East Main Street, Canon City, Colorado 81212. If a statement of reasons for the appeal is not included with the notice, it must be filed with the Interior Board of Land Appeals, Office of Hearings and Appeals, U.S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, VA 22203 within 30 days after the notice of appeal is filed with the Authorized Officer.

SIGNATURE OF AUTHORIZED OFFICIAL:

/s/ Keith E. Berger
Keith E. Berger, Field Manager

DATE SIGNED: 7/22/14

